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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,894	02/27/2004	Yoshitaka Suzuki	14225.10US01	9320

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EXAMINER	
HAUGLAND, SCOTT J	

ART UNIT	PAPER NUMBER
3654	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/789,894

Applicant(s)

SUZUKI ET AL.

Examiner

Scott Haugland

Art Unit

3654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4, 5, and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4, 5 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 5 and 7 are objected to because of the following informalities: "contract" should be --contact-- on the last line of claim 5. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fohl (U.S. Pat. No. 4,109,881) in view of Taguchi et al (U.S. Pat. No. 4,478,433).

Fohl discloses a seat belt device in which a motor (return spring; col. 2, lines 59-61) of a retractor is driven for rotation in a normal direction to take up a webbing of a seat belt. When an acceleration equal to or larger than a predetermined value is applied to the vehicle, the webbing is locked so that it cannot be drawn out of the retractor (col. 9, lines 45-68). When a collision of the vehicle has been avoided, and it is detected that acceleration of the vehicle has been reduced to be smaller than the predetermined value, the motor of the retractor is driven for rotation in the normal

direction to cancel the locking, thereby loosening the webbing (col. 10, lines 1-19). The retractor includes an inertia gear 8 and a locking lever 10.

Fohl does not disclose an electric motor that drives the retractor or the claimed type of acceleration sensing means.

Taguchi et al teaches using an electric motor to drive webbing in a seat belt retractor, the motor being operated to tighten the seat belt in response to a collision predicting signal (Fig. 4; col. 6, lines 44-64). Taguchi et al teaches locking a seat belt reel in response to vehicle acceleration using a lever 46 and weight 43.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Fohl with an electric motor for driving the retractor that is operated based on a collision predicting signal as taught by Taguchi et al to allow greater control over the retractor and webbing and to increase effectiveness of the seat belt by taking up slack. It would have been obvious to sense acceleration using an one of the claimed systems to avoid redundancy in vehicles having such systems since any sensor of acceleration would obviously have been usable.

Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art of the page 1 (last two lines) and page 2 of the specification in view of Takada (U.S. Pat. No. 4,314,680) or Japanese Pat. Doc. No. 2000-211474 (JP '474).

The admitted prior art discloses a seat belt device comprising a retractor, an electric motor driven to take up webbing based on a collision predicting signal and

Art Unit: 3654

driven in a reverse direction in response to the collision predicting signal disappearing, a movable weight, and a locking lever (ratchet claw).

The admitted prior art does not disclose a weight housing, weight seat, a recess in the top surface of the weight, and a projection on the locking lever.

Takada teaches providing an inertia sensor and reel lock with a weight housing 10, weight seat 20, a recess 27' (Fig. 5) in the top surface of the weight 22', and a projection 28b on a lower surface of a locking lever 28' to contact the recess of the weight member.

JP '474 teaches providing an inertia sensor and reel lock with a weight housing, weight seat 34, a recess 31 in the top surface of the weight, and a projection 32 on a lower surface of a locking lever 28 to contact the recess of the weight member.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the seat belt device of the admitted prior art with a weight housing, weight seat, a recess in the top surface of the weight, and a projection on the locking lever as taught by Takada or JP '474 to detect acceleration of the vehicle on which the seat belt device is mounted and lock the reel of the retractor.

With regard to claim 7, it would have been obvious to obtain the collision predicting signal from an adaptive cruise control system since any signal that indicates a higher probability of a collision would obviously have been usable.

Response to Arguments

Applicants' arguments filed 4/27/07 have been fully considered but they are not persuasive.

Applicants argue that neither Fohl or Taguchi et al discloses sensing means comprising an ACC, VSA, EPS, SRS, or AT. However, both Fohl and Taguchi et al include means for sensing acceleration. It would have been obvious to an ordinary artisan use an acceleration signal from one of the known sources above to provide the required signal in Fohl.

Applicants argue that neither Fohl or Taguchi et al discloses the structure of the sensor having a weight recited in claim 5. However, both Takada and Japanese Pat. Doc. No. 2000-211474 disclose this structure. It would have been obvious to use this particular sensor structure in the admitted prior art to lock the reel in response to vehicle acceleration as required by the admitted prior art.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Midorikawa et al (U.S. Pat. No. 6,332,629) and Midorikawa et al (U.S. Pat. No. 6,485,057) are cited to further show electric motor driven seat belt retractors.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. The new grounds of rejection were necessitated by the amendment

to claim 5. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Haugland whose telephone number is (571) 272-6945. The examiner can normally be reached on Mon. - Fri., 10:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Cuomo can be reached on (571) 272-6856. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3654

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


sjh
7/5/07


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